

eClinicalWorks

# CASE STUDY



## TRILLIUM FAMILY MEDICINE

USING THE LATEST TECHNOLOGY TO EMPOWER THE PATIENT AND  
IMPROVE OFFICE EFFICIENCY AND QUALITY OF CARE BY MAKING  
TIME FOR MEANINGFUL INTERACTIONS

*improving healthcare together*

### The Challenge

At a time when doctors are being asked to do more with less, a solo practitioner in North Carolina sought to use healthcare IT to actually reduce his overall patient panel and costs, while improving the quality of care and patient satisfaction.

### The Solution

Trillium Family Medicine trained its patients to use eClinicalWorks Patient Portal, used a standard deviation calculation to rightsize its schedule, and maximized use of pre-appointment questionnaires to transform its practice.

### The Results

By implementing eClinicalWorks technology and training his patients to be true partners in their healthcare, Dr. S. Mark McNeill was able to reduce his patient load by 50%, avoided the costs of hiring additional staff, and began to enjoy the practice of medicine more through developing patient relationships more fully.

## Trillium Family Medicine Asheville, North Carolina

Compassionate, Patient-Centered, High Quality  
Care for Patients of All Ages



Dr. S. Mark McNeill  
Founder, Trillium Family Medicine

### A 'Physician Champion' of Healthcare IT

Dr. S. Mark McNeill is no stranger to the world of governmental mandates in medicine. He understands the alphabet soup of programs and regulations, and the role that healthcare IT plays in helping practitioners of all sizes navigate the rules without losing sight of their patients.

During his days in a group practice in 2008, Dr. McNeill had become the “physician champion” for helping his group transition from paper records to the eClinicalWorks Electronic Health Record in 2008.

“And, of course, once you become the physician champion with the Electronic Health Records, you get involved with a lot of different things, including the business side of medicine and quality measures, Meaningful Use, Patient-Centered Medical Home,” he said. “I was then recruited by another practice to come and be their IT physician champion.”

Once again, Dr. McNeill met the challenge.

But his next challenge would take matters one giant step further, confounding the conventional wisdom that suggests physicians

today need to see more and more patients while simultaneously struggling to get a handle on complex and sometimes confusing government mandates and payment models.

Dr. McNeill's next adventure, Trillium Family Medicine, located in Asheville, North Carolina, would seek to use technology to achieve his goal of seeing *fewer* patients while enjoying the practice of medicine.

## A Patient Portal-Based Practice

"Trillium Family Medicine is unique in the fact that it is a low-overhead, Patient Portal-based practice," Dr. McNeill explained. "It means that we run our entire workflow through the Patient Portal. We train our patients to schedule their own appointments using the

Patient Portal rather than calling on the phone. We train our patients to seek clinical advice through the Portal rather than reaching out by a phone call. We train our patients to receive their labs and diagnostic imaging results through Portal rather than the traditional ways of phone calls and letters."

To be sure, the choice to make the Patient Portal the focal point of Trillium's workflow was a conscious one, but it wasn't simply a matter of preference. In past decades, Dr. McNeill observed, there was so much money in healthcare that practices could run offices with many employees, maintain relatively inefficient workflows, and still make a reasonable income.

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"But those days are long gone," he said. "Unfortunately, those same workflow processes are still in effect — traditional phone call workflows and letter workflows. The technology has come so far, and the Portal provides so many opportunities. Yet very few physicians are making the most of it."

Trillium Family Medicine is hardly the only practice using Patient Portal and similar Patient Engagement tools, but the numbers aren't as high as one might think, particularly in light of how valuable such tools can be.

One factor that negatively impacts the rate by which any Patient Engagement product is adopted is the degree to which the providers believe in and promote the product, as detailed in a January 2016 report in Patient Engagement HIT newsletter.<sup>1</sup>

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<sup>1</sup> <http://patientengagementhit.com/news/patient-portal-adoption-rates-hinge-on-provider-viewpoints>

The report detailed a study of 20 providers in rural North Carolina — including a large academic medical center, a state university, and 16 health centers — which found that many providers were concerned Patient Portal would increase the number of phone calls they receive.

Another concern raised by providers was that using the Patient Portal might encourage patients to believe they don't need to physically visit the doctor.

And yet, in spite of the concerns, a majority of those interviewed for the study believed that the use of tools such as Patient Portal would increase over time.

That speaks to the fact that in healthcare, as in many areas of life, technology is seen as cutting both ways. Used properly, it can confer enormous convenience and advantages; used haphazardly or thoughtlessly, it can cause frustration and unintended consequences.

The difference lies in education and training.

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“At this point, we have 75% of our appointments being made by patients on the Portal, as opposed to calling or walking in. So only one out of four patients needs any type of assistance with an appointment in my office, three out of four are doing it themselves, as opposed to a traditional office, where most appointments are brokered through the help — or hindrance — of a receptionist or medical assistant.”

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— Dr. S. Mark McNeill  
Founder, Trillium Family Medicine

## Training Patients, Reducing Staff

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Dr. McNeill was determined to make his practice a leader in implementing healthcare IT. To achieve that, he began by placing enormous emphasis on training patients in the use of the Patient Portal, helping them overcome any reservations they

might have about the technology, and patiently showing them how it can benefit them.

“At this point, we have 75% of our appointments being made by patients on the Portal, as opposed to calling or walking in,” Dr. McNeill said. “So only one out of four patients needs any type

of assistance with an appointment in my office. Three out of four are doing it themselves, as opposed to a traditional office, where most appointments are brokered through the help — or hindrance — of a receptionist or medical assistant. And you're paying those receptionists or medical assistants \$16 an hour or more plus benefits to do that. That's fairly expensive. With the Portal, there's no extra cost outside of my monthly fees to eClinicalWorks."

That training pays off for the practice in two ways. First, because patients are booking their own appointments and using the Portal to seek clinical advice, the phones at Trillium Family Medicine don't ring nearly as often as at other practices. That, in turn, means that Dr. McNeill can make do with a smaller staff.

“We make a point to respond rapidly to clinical advice questions through secure messaging. Our goal is to get back in touch within two business hours. So many times, if a patient has a concern in the evening, instead of calling me, they'll send me a message, because they know they're going to get a response from me first thing in the morning.”

— Dr. S. Mark McNeill  
Founder, Trillium Family Medicine

“The average family physician employs four to five full-time employees per physician to support them,” he said. “With this Patient Portal-based workflow model, I'm able to run my office with just one full-time medical assistant and a part-time office manager.

And in that reduced patient load lies the second benefit for Dr. McNeill — the ability to spend more time with each patient, building a stronger relationship and providing the best possible quality of care.

## Less Anxiety, Happier Patients

But the benefits for patients begin even before they get to Dr. McNeill's office, in the form of less anxiety and greater confidence.

“The patients love the real-time scheduling,” Dr. McNeill said. “It decreases a lot of anxiety. If you take an acute visit for a new complaint, for example, generally most of the time the patient decides they want to come in the night before, but they'll spend that night worrying ‘Am I going to be able to get in? What time is my appointment going to be? How am I going to plan my day?’”

That anxiety often turns into a phone call to the doctor's office. Enough calls, and the benefits of training patients in use of the Patient Portal can disappear.



# Making the patient part of your health care team

Healthcare practices across the country are already seeing the benefits of EHR patient portal implementation on Patient Engagement and beyond. The rewards are real: more informed, involved patients; effective delivery of care; and reduced burden on office staff. And so are the barriers: cumbersome enrollment; clunky interfaces; reluctant patients and office staff; and questions of privacy and security.

## Encourage Patient Portal Access

Evidence shows patients are more likely to access their portal when clinicians and staff incorporate touch points in workflows to demonstrate and discuss the value of portal use.

### Touchpoints Can Include:

- Receptionist at check-in
- Video in the waiting room
- Nurse/medical assistant taking vitals
- Physician or nurse Practitioner during exam
- Receptionist at checkout
- After-visit summary printout

## Interact/Educate

Empowering the patient and creating a reason for them to return to their portal.

### Enable Patients to:

- Check test results
- Request prescription refills
- Validate medical records
- View education materials
- Schedule appointments
- View billing statements
- Make online payments

## Enable Secure Email

Expanding patient-provider communications and care coordination.

### Results:

- Better transitions of care
- Attention to routine health issues
- Timely exchange to address patient questions and concerns
- Better monitoring of patient conditions
- Sharing of electronic statements

Source: [healthIT.gov](http://healthIT.gov).

<https://www.healthit.gov/playbook/pdf/improving-patient-engagement-through-health-it>

“But in this model, patients don’t have that concern,” Dr. McNeill notes. “They decide at 1 o’clock in the morning that they want to be seen the next day? They log on to the Portal, grab an appointment, go back to bed. They *know* they’re going to be seen. They can plan the rest of their day.”

The effects of stress on physical health, first recognized by clinicians in the mid-nineteenth century, have become increasingly well documented in recent years, with a major 2005 study in the Annual Review of Clinical Psychology detailing the effects, negative and positive, of various stressors.<sup>2</sup>

2 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2568977/#R15>

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Along with well-trained staff and patients, lower anxiety, and easy and flexible scheduling, Trillium adds one more piece of technology — patient questionnaires, dubbed “Instant Medical History,” created by one of eClinicalWorks’ partners, Primetime Medical Software, and integrated directly into the Patient Portal.

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Dr. McNeill also addresses patient anxiety in a way that is almost unheard of in medicine today. Whenever possible, he takes his own after-hours phone calls.

“That freaks a lot of people out!” he admits.

Yet, far from being a burden, it’s actually very manageable, thanks again to Patient Portal’s messaging function.

“We make a point to respond rapidly to clinical advice questions through secure messaging,” Dr. McNeill continued. “Our goal is to get back in touch within two business hours. So, many times, if a patient has a concern in the evening, instead of calling me, they’ll send me a message, because they know they’re going to get a response from me first thing in the morning. So that really decreases patient

anxiety. So, back to your question about calls. I don’t get that many calls. So, I get only about four after-hours calls a month.”

## Mathematics and Scheduling

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But can empowering patients to book their own appointments have a downside? Is it right for every practice? And even if it is the right move, how can doctors avoid having either too many or too few patients on a given day?

For that, Trillium Family Medicine has reverted to a bit of fairly advanced mathematics.

They began by analyzing the average number of appointments over several months and found that number was right around 12. Next, they determined the standard deviation or roughly the average variation in daily appointments. That turned out to be three.

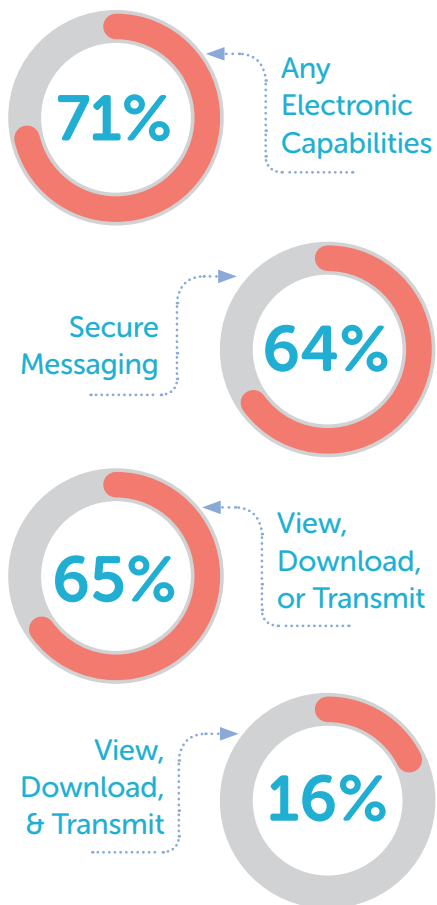
“We go two standard deviations from the mean,” Dr. McNeill concluded, “which for us would be 18 appointments. We publish 18 appointments to the Portal, and we know we’re going to likely meet the needs of our patients 97.5% of the time, same-day. Now, just for that wiggle room, we go ahead and publish 20 appointments.”

That added flexibility means that Trillium Family Services is almost always able to honor the appointments that patients are making through the Patient Portal.

## How Patient Portals Improve Patient Engagement

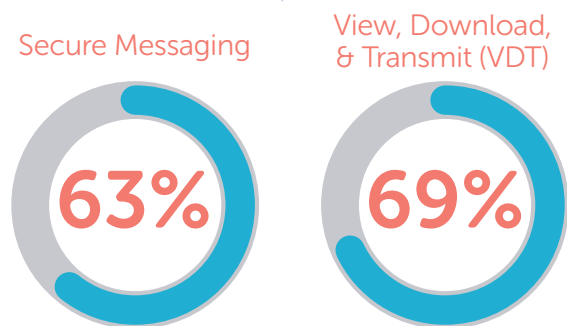
**Research** demonstrates that providing patients with access to their clinical information empowers them to increase Patient Engagement and improve health outcomes. The ONC Interoperability Roadmap calls on healthcare providers to enable patients to electronically view, download, and transmit their health information to a destination of the patient's choice, and the Federal Health IT Strategic Plan encourages the advancement of patients' ability to access, amend, and make choices regarding the disclosure of their electronic health information.

### Percent of U.S. Physicians That Provided Electronic Capabilities to Their Patients in 2015



## How Common Are Patient Portals?

**This** technology is becoming increasingly popular throughout the healthcare industry. According to the National Coordinator for Health Information Technology (ONC), 69% of hospitals gave their patients access to view, download, and transmit their health data in 2015, and 63% had the ability to secure message with their patients.



The booking process also benefits from the application of the “Keep it simple, stupid” principle. The practice offers just one kind of appointment through the Portal: “Office Visit.” And it offers just one time slot: 20 minutes.

Trillium does conduct other kinds of visits, of course, including well child visits, sick visits, and new patient appointments. But they don’t publicize them as such through the Patient Portal.

“Because If patients have too many options, that will confuse them,” Dr. McNeill said. “They’ll get frustrated. And you know what they’ll do? They’ll call. So, we make sure it’s easy. I mentioned before, we train the heck out of them. At their first visit, every patient gets a thorough orientation on how to schedule your own appointment, and we make sure they feel comfortable doing that by the time they leave.”

But Dr. McNeill and his staff also keep a close eye on the schedule to ensure that each patient is receiving the appropriate amount of time. After all, not every appointment can or should be handled in 20 minutes.



“What we do as part of when we start the day at Trillium Family Medicine,” he said, “is we have a staff huddle, my medical assistant, my practice manager, and myself, and we look on the scheduling screen to see what has appeared, and we’ll do our best to make adjustments if we see somebody’s going to need more time, or things are getting clogged. That may mean blocking out some appointments around a patient who needs more time or that may mean scheduling some catch-up time later in the appointment day.”

Only rarely — perhaps once every few months — will the practice have to call a patient and ask them to accept a different time for their appointment.

## A Powerful Questionnaire

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Along with well-trained staff and patients, lower anxiety, and easy and flexible scheduling, Trillium adds one more piece of technology — patient questionnaires. Dubbed “Instant Medical History,” and created by one of eClinicalWorks’ partners, Primetime Medical Software, they integrated directly into the Patient Portal.

“This is a pretty sophisticated product,” Dr. McNeill explained. “It has about 70,000 questions, and it uses branching logic to give a patient a personalized questionnaire based on their chief complaint or complaints. They can select from a list of 30 common chief complaints, or they can type in what they want to talk about that day, and the software is sophisticated enough to start a questionnaire. It’s sort of like having a third-year medical student in the office. And third-year medical students take good histories.”

The software is obviously not as skilled as a real doctor, but it achieves its purpose.

“It’s great on many levels,” Dr. McNeill noted. “It engages the patient in their own care, gets them organized in their thoughts before they come into the office.”

Having those questionnaires available in the Patient Portal means that Dr. McNeill and his staff have a kind of detailed scouting report available at their morning conference each day, permitting them to fine-tune their schedules and know what to expect.

“You get some pushback at first,” he added, “because people don’t want to do their homework. So, again, we spend time that first day talking about why this is important, and making sure they know how to do it. Occasionally patients will come in and they haven’t done it,

and that's OK. We have a PC terminal in our waiting room. We also have PCs in each exam room, and so we'll give the patient time to complete it. The beauty of that is it gets them back on the Portal,

and using the Portal, and getting more comfortable with it, so they're more likely to do it the next time. They also see that we're serious about it, like we really do want this, this is important."

And it can be surprising when the computerized questionnaire captures information that might have escaped the doctor's attention during a face-to-face visit.

"One area that this product does a really good job with is drug abuse," Dr. McNeill said. "The computer always remembers to ask about that. It's programmed to. Sometimes, I get distracted with the chief complaint and

what's going on and I forget to ask about alcohol use or follow up on somebody who might have an issue there. It's amazing how many alcoholics have been picked up by the web interview that I might have missed. It's amazing how much patients will share freely with a computer."

## Results: Enjoying Medicine Again

For Trillium Family Medicine, the bottom line is twofold — a reduced patient load and increased engagement.

"Previously I was having to see around 20 to 25 patients a day to meet overhead, and then take home a reasonable income myself," Dr. McNeill said. "Now, I'm seeing about 12 patients per day, so my break-even point before was probably around 12 to 14. Now, my break-even point is around six to seven patients a day. To fill up my schedule, I needed probably 1,800 patients before, and now I'm practicing with about 1,000 patients."

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That's a reduction in patient volume of more than 40%, and while the increase in satisfaction — for provider and patients alike — cannot be as precisely quantified, it is every bit as real.

It means that Dr. McNeill spends less time on the phone, and more time studying the needs of his patients. By training patients to use the Patient Portal, he can respond more quickly and clearly to queries. And Trillium's patient-directed booking system nearly always produces satisfaction both for those seeking care and those providing it, while ensuring that when those office visits take place, Dr. McNeill is spending less time typing on a keyboard or watching a screen, and more time confirming what the patient has already told him through a questionnaire — and determining an effective course of treatment.

Getting there, he said, is actually quite simple.

"It's good salesmanship," he said. "You've got to sell the heck out of it, as part of that training, making sure they know it, and then you've got to follow it up with good service. When they send me a message from the Portal, they get a response in a reasonable amount of time."

And that, in the end, means patients who feel their doctor is truly communicating with them, treating them with the respect and care they deserve.

"There are so many strengths about getting information from the patient ahead of time," Dr. McNeill said. "But at the end of the day, this is all about relationships. When a patient feels like they are being listened to, and they have good communication going on with their physician, you're naturally going to have better outcomes. Patients are going to be more compliant, they're going to trust you more. Getting those types of relationships takes time. And if you can streamline your workflow, lower your overhead, you're going to have more time per patient, and that's the best benefit of using the Portal as much as you can." ■



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Access • Technology • Quality

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